

## 1: Calculus II - Parametric Equations and Curves

*CALCULUS BC WORKSHEET 1 ON VECTORS* Work the following on notebook [www.enganchecubano.com](http://www.enganchecubano.com) your calculator on problems 10 and 13c only. 1. If  $2 \leq t \leq 3$  and  $\mathbf{r}(t) = (t^2 - 1)\mathbf{i} + (t^3 - 1)\mathbf{j}$ , find  $\frac{dy}{dx}$  at  $t = 2$ . 2. If a particle moves in the  $xy$ -plane so that at any time  $t > 0$ , its position vector is

Unfortunately, there is no real answer to this question at this point. Sometimes we have no choice, but if we do have a choice we should avoid it. We have one more idea to discuss before we actually sketch the curve. Parametric curves have a direction of motion. So, when plotting parametric curves, we also include arrows that show the direction of motion. Here is the sketch of this parametric curve. So, it looks like we have a parabola that opens to the right. Before we end this example there is a somewhat important and subtle point that we need to discuss first. Had we simply stopped the sketch at those points we are indicating that there was no portion of the curve to the right of those points and there clearly will be. Without limits on the parameter the graph will continue in both directions as shown in the sketch above. We will often have limits on the parameter however and this will affect the sketch of the parametric equations. Example 2 Sketch the parametric curve for the following set of parametric equations. Therefore, the parametric curve will only be a portion of the curve above. Here is the parametric curve for this example. It is now time to take a look at an easier method of sketching this parametric curve. We will sometimes call this the algebraic equation to differentiate it from the original parametric equations. There will be two small problems with this method, but it will be easy to address those problems. Example 3 Eliminate the parameter from the following set of parametric equations. The reality is that when writing this material up we actually did this problem first then went back and did the first problem. Plotting points is generally the way most people first learn how to construct graphs and it does illustrate some important concepts, such as direction, so it made sense to do that first in the notes. In practice however, this example is often done first. Often we would have gotten two distinct roots from that equation. It is fairly simple however as this example has shown. All we need to do is graph the equation that we found by eliminating the parameter. As noted already however, there are two small problems with this method. The first is direction of motion. This is generally an easy problem to fix however. In some cases, only one of the equations, such as this example, will give the direction while in other cases either one could be used. It is also possible that, in some cases, both derivatives would be needed to determine direction. It will always be dependent on the individual set of parametric equations. Example 4 Sketch the parametric curve for the following set of parametric equations. Clearly indicate direction of motion.

## 2: EXTRA PRACTICE WORKSHEETS CALC AB/BC | Serra

*CALCULUS BC WORKSHEET ON PARAMETRIC EQUATIONS AND GRAPHING* Work these on notebook paper. Make a table of values and sketch the curve, indicating the direction of your.

## 3: Parametric equations, polar coordinates, and vector-valued functions | Khan Academy

On problems 11 - 12, a curve  $C$  is defined by the parametric equations given. For each problem, write an integral expression that represents the length of the arc of the curve over the given interval.

## 4: Calculus II - Parametric Equations and Polar Coordinates

*CALCULUS BC name \_\_\_\_\_ WORKSHEET ON PARAMETRIC CALCULUS* Work these on notebook paper. A. Make a table of values and sketch the curve, indicating the direction.

## 5: Parametric Equations Worksheets - Teacher Worksheets

# PARAMETRIC FUNCTIONS WORKSHEET CALCULUS BC. pdf

*Parametric Equations For Vectors. Showing top 8 worksheets in the category - Parametric Equations For Vectors. Some of the worksheets displayed are Parametric equations, Calculus bc work on parametric equations and graphing, Chapter 11 work parametric equations and polar, Honors pre calculus vector word problems 50 degrees with, Vector parametric and symmetric equations of a line, Math*

## 6: Parametric Equations For Vectors Worksheets - Printable Worksheets

*AP Calculus BC CHAPTER 11 WORKSHEET PARAMETRIC EQUATIONS AND POLAR COORDINATES ANSWER KEY Derivatives and Equations in Polar Coordinates 1. The graphs of the polar curves  $r = 6\sin 3\theta$  and*

## 7: Calculus Bc Worksheets - Printable Worksheets

*AP Calculus BC CHAPTER 11 WORKSHEET PARAMETRIC EQUATIONS AND POLAR COORDINATES Name Seat # Date Review Sheet A SEE OTHER SIDE CALCULUS BC (a graphing calculator maybe used).*

## 8: AP BC Calculus - Richardson's Math Classes

*For more information about vector functions, check out this AP Calculus BC Review: Vector-Valued Functions Example 1. Velocity Find the velocity vector at  $t = 1$  for an object traveling according to the parametric function  $x = t^2 - 2t + 1$ ,  $y = -t^2 + 2$ .*

## 9: Calculus AB and BC

*AP Calculus BC CHAPTER 11 WORKSHEET PARAMETRIC EQUATIONS AND POLAR COORDINATES ANSWER KEY Review Sheet B 1. a)  $3\cos T$   $6\sin T$  |*

*The Healing Experience Alice Walker by Erin Huskey The left in Britain during 1985 Marketing research and consumer behaviour book Pro engineer wildfire 4.0 tutorial St. Petersburg and its people New history of the Royal Mint Fall of five book The Pathophysiology of combined injury and trauma Human factors for engineers Italy, society in crisis, society in transformation Miss Bindergarten Stays Home From Kindergarten (Miss Bindergarten Books) Lift and Learn Opposites The effects of testosterone on avian vocalizations, by R. J. Andrew. 1st grade grammar worksheets The Louisiana Purchase in American history Family Law Q&A (Q a Series) I would rather be assassinated 11th grade heath worksheets with answers God sent his son sheet music History of the Plymouth Plantation English literature seen through French eyes. Angels of the workplace Fielas child London through the looking glass in colour Labour pains and labour power List of molecular formula Christian manifesto Digital logic design viva questions and answers Christianitys interaction with the world The learning tasks of critical theory The horse-leech hath two daughters Rehabilitation in patients with tumors of the spinal column Leah Moinzadeh and Sandee Patti The Classic Guitar Collection Vol. 3 Precambrian Geology of the Tobacco Root Mountains, Montana (Special Papers (Geological Society of America Mastering django core Transactional Six Sigma for Green Belts Preeminently a city of homes: housing The church-catechism Moments of transition*